

DESCRIPTION OF A NEW SPECIES OF ANNELID FROM WOODS HOLE.

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Syllides verrilli n. sp.

Form moderately slender, slightly flattened and wider in the middle region. Size small, length 2.5-3 mm., maximum width .2-.3 mm.

Prostomium large (fig. 1, *a*), depressed, slightly wider than long, broadly elliptical or subquadrate with rounded corners, often slightly emarginate anteriorly and nearly straight posteriorly. Eyes three pairs, reddish brown; the first pair minute and situated well in advance of the others just behind and external to the base of the lateral antennæ; the second and third pairs much larger, subequal, their diameter about $\frac{1}{3}$ the width of the prostomium, both on posterior half of prostomium; the middle pair widest apart and separated by about 5 times their diameter, the posterior pair slightly behind and mediad of them near the posterior margin of the prostomium.

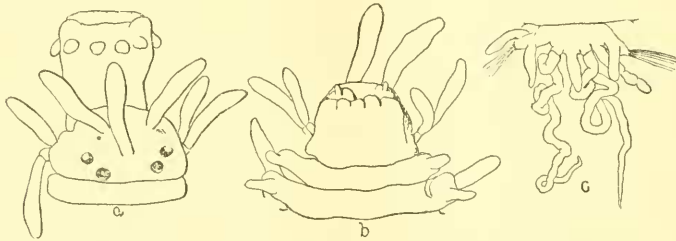


Fig. 1.—*Syllides verrilli*. *a*, dorsal view of head with protruded proboscis; *b*, ventral view of prostomium and 3 segments, showing palps; *c*, pygidium with caudal cirri, all $\times 83$. Fig. *b* from No. 2402, all others from No. 2401.

Palpi (fig. 1, *b*) very small, mammilliform, situated on the ventral face of the prostomium and directed downwards, invisible or nearly so from above. They consist of swollen bases and short cirriform distal portions which alone ever appear in dorsal views. Tentacles (fig. 1, *a*) all short, stoutly clavate; the middle one arising on a line joining the anterior borders of the middle pair of eyes, their length equaling or slightly exceeding the prostomial width, their ends bluntly rounded and about twice as thick as the base. Lateral tentacles arise close to anterior border of prostomium, their bases separated by a distance

nearly equal to $\frac{1}{2}$ the width of the prostomium, their length slightly less than the median tentacles and nearly or quite the prostomial width. When visible from above the ends of the palpi appear immediately beneath these.

Peristomium obsolete or nearly so dorsally, almost completely coalesced with the prostomium below and projecting but little beyond it laterally. The mouth far forward, with prominent posterior lip. Tentacular cirri (figs. 1, *a* and *b*) like the tentacles, from which they differ only in being supported on very short cirrophores, the dorsal as long as lateral tentacles, ventral slightly shorter.

Metastomial region very slightly depressed, the segments increasing in width slightly to the middle. The first seven, as far as the caudal end of the gizzard, are short and crowded; succeeding ones are longer and contain the gonads. Pygidium a small ring with rounded posterior outline, scarcely distinguishable from the preceding segment. It bears a short unjointed median ventral style and a pair of very long, slender, unjointed cirri as long as the greatest width of the body (fig. 1, *c*).

Parapodia (fig. 2, *a*) strictly uniramal on the first seven metastomial segments of sexually mature worms and on all segments of immature worms. They are prominent, their length nearly equaling the width of

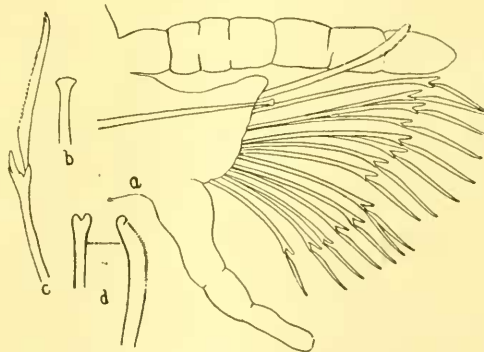


Fig. 2.—*Syllides verrilli*. *a*, parapodium VIII from behind, $\times 250$; *b*, tip of neuropodial acieulum, $\times 600$; *c*, average neuropodial compound seta from X, $\times 600$; *d*, profile and rear views of end of simple neuropodial seta, $\times 600$. All drawn from No. 2402.

the body, slender, somewhat compressed at the base, the neuropodium becoming conical distally and ending in a salient dorsal angle, from which the distal border slopes ventrad, and which is supported by a single stout acieulum. Anterior and posterior short lips embrace the

bases of the setæ, which are arranged in a broad vertical fan (fig. 2, *a*). The first seven pairs of parapodia have no notopodia whatever, the succeeding ones on sexually mature worms bear notopodial setigerous sacs on the dorsal face of the base of the neuropodium, but there is no distinct notopodial elevation or lobe.

On the first three metastomial segments the notocirri are exactly like the peristomial cirri in both form and size. Succeeding ones become more slender and tapered, with the tip often abruptly more slender, and increase in length until they equal the width of the segments. They also become distinctly jointed or even beaded (fig. 2, *a*). In the middle of the body they are as long as the body diameter and have 7-8 divisions. There is a great difference in this respect in different specimens, some having the cirri much more strongly moniliform than others. Sometimes there is a slight but distinct alternation of longer and shorter cirri, the former being always the more strongly beaded; but these conditions are not constant. Posteriorly the cirri become again shorter. Neurocirri (fig. 2, *a*) are coalesced with the ventral border of the neuropodia to near the end, where the styles become free and reach to the ends of the ventral setæ. They are sub-conical, usually with irregular constrictions and thickenings and a more slender blunt terminal piece.

Aciculum single, neuropodial only, rather stout, tapered, straight or slightly curved, extending obliquely nearly into the dorso-lateral angle of the neuropodium, beyond which it projects and terminates in a large, flattened and roughened knob (fig. 2, *b*). Neuropodial setæ of two kinds, both longer than the parapodium and colorless. The first (fig. 2, *d*) is a single and never more, moderately slender, simple seta arising dorsal to the end of the aciculum of each parapodium, curved and slightly thickened distally, finely toothed along the convex side and slightly enlarged and bifid at the end. The second form is compound (fig. 2, *c*). These form spreading vertical subacicular tufts which on the more anterior parapodia contain 20 or more in several ranks, the number becoming gradually reduced to 10 or 12 on middle segments and 7 or 8 posteriorly. Shafts more slender than the simple setæ, slightly curved, deeply unequally bifid distally, with a single small accessory tooth on the side of the larger division. Appendages delicate, slender, elongated, the longest anterior dorsal ones equalling the diameter of the parapodium, but diminishing toward the ventral side posteriorly until they are only $\frac{1}{2}$ as long. Distally they are divided into two slender, unequal, slightly curved teeth separated by a narrow cleft. Apparently the margins are finely fringed, but this appearance disappears posteriorly.

Sexually mature specimens bear, on all parapodia after VIII, a tuft of extremely delicate capillary setæ as long as the width of the body plus one parapodium. These do not arise from a special notopodial tubercle, but from a notopodial setigerous area at the base of the dorsal and posterior face of the neuropodium, and are not even supported by a notopodial aciculum.

When retracted the proboscis occupies the first 3 segments and the gizzard the next 5. When extended the proboscis (fig. 1, *a*) is cylindrical or urn-shaped, reaching to or beyond the end of the cephalic tentacles; the chitinous lining thick, brownish, with a smooth reflected rim and no tooth. Just behind the rim is a circle of 10 rather prominent, rounded, soft papillæ. When the proboscis is protruded the very large gizzard is drawn forward into somites II to VI inclusive.

Body generally colorless when alive, the intestine grayish drab and the eyes bright red.

As noted above the sexual forms are simple epitokes, with swimming setæ and gonads beginning at somite IX behind the stomach.

Taken rather rarely at the surface at Woods Hole. Type No. 2402, Academy of Natural Sciences of Philadelphia. This is the species referred to by Verrill as having been taken at Woods Hole along with *S. setosa* (*Rep. U. S. Fish Comm.* for 1882, 1884, p. 664, footnote), and is perhaps the *S. longicirrata* Oersted, of Webster and Benedict, taken by them at Eastport, Me., but is not that species as described by European authors. From typical species of the genus it differs in the small size and ventral position of the palps. In this respect it stands nearest to *S. setosa*, with which it should probably stand in a separate subgenus.